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5 rotary element
 5a first tongue-like element
 5b second tongue-like element
 6 connecting rod element
 7 rotary movement
 8 engagement arm
 9 engagement arm
 10 projection
 11 projection
 12 axis of rotation
 13 projection
 14a first end of the connecting rod element
 14b second end of the connecting rod element
 15 projection
 16 base body
 17 backward movement
 18 linear movement
 19 piercing direction
 20 longitudinal axis
 21 slot
 22a first portion of the curved path
 22b second portion of the curved path
 23 further curved path
 23a maximum
 24 spiral spring
 25 engagement arm
 26a curved path portion
 26b curved path portion
 27 gap between engagement arm and projection
 28 projection
 28a cylindrical element

The invention claimed is:

1. A piercing device for taking blood for medical analyses, comprising a base body, comprising at least one needle which is arranged therein and a tip which can be extended, comprising a needle holding element which encloses the needle at least in part and comprising a drive unit for driving a movement of the needle together with the needle holding element with respect to the base body, wherein a rotary element for carrying out a rotary movement is arranged between the drive unit and the needle holding element as a connection element, and the rotary movement, both left and right, respectively brings about the movement of the needle holding element both forwards and backwards,

wherein the drive unit can be moved linearly and has at least a first and a second engagement arm, a first one of which engages in a first one of at least a first and a second projection on the rotary element, the second projection being deflectable by means of a curved path on the second engagement arm without said second projection taking on an engagement position with the second engagement arm, during each rotary movement.

2. The piercing device according to claim 1, wherein the first projection and the first engagement arm, as seen in the

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piercing direction, are arranged left of a longitudinal axis which extends through an axis of rotation of the rotary element, and the second projection and second engagement arm are arranged right of the longitudinal axis.

3. The piercing device according to claim 2, wherein, during said rotary movement of the rotary element, each of the first and second projections can be moved, by the respective first and second engagement arms engaging therein, from one side to another side of the longitudinal axis on an arced path in one plane.

4. The piercing device according to claim 1, wherein the rotary element is in the form of a disc-shaped element, having an axis of rotation arranged perpendicular to the plane of the disc and to the direction of movement of the needle holding element, and the first and second projections are arranged at the edges of flexibly formed tongue-shaped elements of the disc plane, the tongue-shaped elements being deflected in a direction of the extension of the axis of rotation.

5. The piercing device according to claim 4, wherein a first portion of the curved path is arranged below a first tongue-shaped element and a second portion of the curved path is arranged below a second tongue-shaped element at an inclination towards the disc-shaped element.

6. The piercing device according to claim 5, wherein the first and second portions of the curved path are arc-shaped in form.

7. The piercing device according to claim 1, comprising at least one connecting rod element which articulates the rotary element to the needle holding element, a projection on a first end of the connecting rod element engaging in a slot arranged on the rotary element and a projection on a second end of the connecting rod element engaging in a recess made complementary thereto on the needle holding element.

8. The piercing device according to claim 7, wherein the first end of the connecting rod element also engages in a further curved path, which is connected to the base body and an extension of which is equipped, in a V-shape and/or curved shape, with a centrally arranged maximum in a direction of the needle holding element.

9. The piercing device according to claim 1, wherein the drive unit is spring-loaded using at least one spring element.

10. The piercing device according to claim 9, wherein the drive unit is spring-loaded using at least one spiral spring which acts in the piercing direction.

11. The piercing device according to claim 1, wherein a first engagement arm engages a first projection on the rotary element, and wherein a second projection is deflectable by means of said curved path on the second engagement arm without said second projection taking on an engagement position with the second engagement arm, during each rotary movement.

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